

Guidance for Watershed Plan Development

RI DEM, Office of Water Resources
September 2021

This document provides guidance on how to develop a watershed plan, particularly for those applicants who apply for Nonpoint Source funds pursuant to the following option in the September 2021 grant Request for Proposals:

In addition to accepting proposals for projects from the watersheds with plans listed in the RFP, DEM is allowing applicants to submit project proposals in other watersheds, provided the applicant commits to preparing a plan utilizing non-grant funds for that watershed within the first 6 months of receiving the grant award. The grant award will be conditional on the completion of a satisfactory watershed plan. As noted above, Section 319 grant funds cannot be used to develop the plan. DEM envisions this approach will be most appropriate for projects within small subwatersheds including, but not limited to, those surrounding lakes and ponds. Applicants taking this course of action must submit a map with their application showing the watershed area that will be subject to the plan.

Applicants developing a watershed plan can take either of the following approaches:

- 1) The traditional approach that includes a great deal of explanatory information about the sources of pollution and possible strategies and results in a plan that is very useful as an educational tool as well as a plan for action, or
- 2) An abbreviated approach that captures the basic watershed information (often in bulleted format) and focuses on the action items to protect and restore water quality and aquatic habitat.

The following is a suggested outline that includes the necessary elements of a watershed plan. Applicants are encouraged to check out the watershed plans posted on the DEM Nonpoint Source webpage at: <http://www.dem.ri.gov/programs/water/quality/non-point/> to see different examples of watershed plans.

Notes:

- Bulleted format is acceptable for any section of the Plan.
- DEM Office of Water Resources staff can provide assistance in preparing the maps identified below as resources allow.

I. Introduction

Purpose of Document: Identify actions that need to be taken to protect and restore water quality (surface water and groundwater) and aquatic habitat in the watershed to achieve the following goals:

- Meet or maintain the water quality standards applicable to the designated uses of the waterbody per the RI Water Quality Regulations, and
- Restore and protect aquatic habitat to achieve a fully functioning aquatic ecosystem to the greatest extent practicable.

II. Watershed Description

Where appropriate, include brief bulleted points that will support and justify actions listed later in Section V.

- A) Hydrology Overview: describe your surface water and groundwater resources
 - Map of surface waters: relevant sub watersheds (drinking water reservoirs), CRMC coastal designations, dams, and wetlands. Extend beyond watershed boundary for context.
 - Map of groundwater resources: (if applicable) major stratified drift aquifers and their recharge areas, wellhead protection areas, and groundwater classification
- B) Drinking Water: % of area dependent on public water, identify water suppliers
 - Map of areas with public drinking water.
- C) Land Cover:
 - Pie chart with percent area in each category and map of land cover.
- D) Wetlands (on map in A)
 - Any unique, large or notable wetlands in the watershed?
- E) Cold water fisheries
 - Map or list of cold water segments depending on how many; numbers on cold water stream miles.
- F) Open space preservation
 - Map showing areas preserved and summary statistics: ownership by state, town or other (private, NGO).

III. Water Quality Conditions

A) Surface Waters

- 1) Impaired water quality segments:
 - Using information from the latest DEM Integrated Water Quality Monitoring and Assessment Report, include a table of water body segments and impairments (include pollutants causing impairments).
 - Map of impaired waters (Category 4A and 5), identify unassessed waters.
 - Map of shellfish closure areas (use Shellfish Program maps).
 - Beach Closures – list by date.
- 2) Where a TMDL has been prepared, list necessary pollutant load reductions to meet water quality standards.
- 3) Harmful algal blooms – impacted waterbodies and dates.
- 4) Other contaminants of concern in the watershed.

B) Groundwater

- 1) Public wells – Water quality data from public wells is available from the RI Department of Health.
- 2) Private drinking water well issues.

IV. Nonpoint Pollution Sources and Aquatic Habitat Issues

Describe the nonpoint pollution sources in the watershed and include a list of pollutants each source generates. Identify sources of aquatic habitat degradation which your plan may address. Identify local actions that have been taken and what more needs to be done to address these sources of pollution and/or stressors to aquatic habitats.

- A) Potential sources of nonpoint source pollution include:
 - Stormwater: Map of impervious cover with percent impervious.
 - Onsite wastewater treatment systems (OWTS): Map of area served by OWTS.

- Road Salt
- Agriculture
- Lawns and Grounds
- Pet Waste
- Household hazardous products/home heating oil USTs.
- Others (depending on the watershed): waterfowl, marine and riverine debris, dredging and dredge material management, and boating and marinas.

B) Potential aquatic habitat issues include:

- Riparian Buffers: provide a general statement about condition of buffers in the watershed.
- Aquatic Invasives: Map or list of where invasives have been identified and the specific problems caused by known invasives.
- Stream bank erosion.
- Stream connectivity/dams.
- Water withdrawal.

V. Implementation Table – Water Quality and Aquatic Habitat Protection and Restoration Actions

Responsibility for restoring/protecting water quality in the watershed is shared among federal, state, and local governments, watershed organizations, private companies, and individuals. (See other watershed plans for typical action items that may be specific to your watershed.)

Implementation Table Headings:

- 1) Action Item: Table divided by topic (e.g., OWTS, stormwater, etc.)
- 2) Milestones (Initial Step(s))
- 3) Responsibility: State agency, town, non-governmental organizations, private companies and landowners. Supporting entities in parentheses.
- 4) Timeframe: ongoing, 1-2 years, 3-5 years, >10 years, as necessary.
- 5) Estimated Cost: Dollar figure or relative indication of cost. For example:
\$ = <\$25,000; \$\$ = \$25,000 -- \$100,000; and \$\$\$ = >\$100,000
- 6) Priority: Required, High, Medium, Low.

Plans to review and cross reference in your watershed plan, and possibly take actions from, include:

- Local Comprehensive Plans
- DEM Restoration Plans (i.e., TMDLs)
- Stormwater Management Plans and feasibility or mitigation studies
- Onsite Wastewater Management Plans
- Wastewater Facility Plans
- Water Supply System Management Plans (large public systems)
- Source Water Protection Plans (small public systems)
- CRMC Special Area Management Plans (SAMPs)
- Other local or regional plans encompassing your watershed and supporting your plan

VI. Public Information and Outreach

Consider how you will promote public understanding about the values of clean water and fully functioning aquatic habitats and the actions necessary to achieve these goals. Plan should

include resources and strategies for individual actions (see DEM's brochure: Simple Ways You Can Help Keep Rhode Island's Waters Clean at <http://www.dem.ri.gov/programs/benviron/water/quality/pdf/tenthing.pdf>)

VII. Financial Support/Implementation Tools

(Descriptions of the funding programs below can be taken from the watershed plans on the DEM webpage.)

- A) DEM Nonpoint Source Grant Program using federal Clean Water Act Section 319 funds
- B) US Department of Agriculture Natural Resource Conservation Service grant programs – Environmental Quality Incentives Program, Wildlife Habitat Incentives Program
- C) Municipal stormwater utility
- D) State Revolving Loan Fund
 - Community Septic System Loan Program
 - Sewer Tie-In Loan Fund
- E) State bond funds
 - Pollution Control
 - Open Space Protection
- F) EPA SNEP
- G) Land Trusts

VIII. Evaluation -- Monitoring and Measuring Progress

Consider how you will monitor and measure progress toward meeting the goals of the watershed plan as it is implemented.

- A) Monitoring -- Identify water quality monitoring efforts in the watershed (governmental and local volunteer monitoring efforts, e.g., URI Watershed Watch).
- B) Tools for measuring progress:
 - Comparison of water quality monitoring data with water quality criteria;
 - Number of BMPs installed;
 - Administrative actions adopted/implemented (ordinances, programs);
 - Documentation of education and outreach activities;
 - Indirect indicators of pollutant load reductions as appropriate (e.g., reduced number of beach closures, reduced number of shellfish closures, presence/absence of key species).